Installing Natural for Entire Screen Builder on OpenVMS Hosts

If the host system on which you run your Natural applications is an OpenVMS system, additional software for Entire Screen Builder has to be installed on the host. The Entire Screen Builder OpenVMS modules are shipped on the Natural OpenVMS CD.

In general, Entire Screen Builder uses the default system parameter values provided with the OpenVMS system.

This chapter covers the following topics:

- Prerequisites

- Setting Up the Entire Screen Builder Components

- Directories

- Configuration File

- Setting Up and Activating the NSWSRVD Daemon

Prerequisites

Supported Operating Systems	OpenVMS Version 7.2 or 7.3.
Other Software Products	Natural Version 4.1.2.12 through 5.1.1.

Setting Up the Entire Screen Builder Components

Setting up Entire Screen Builder on OpenVMS consists of the following steps:

- Step 1: Stop the Entire Screen Builder Daemons

- Step 2: Establish the Environment

- Step 3: Install Natural and Entire Screen Builder with the Demo Application

- Step 4: Check the Environment for Entire Screen Builder

- Step 5: Define the TCP Port Number

Step 1: Stop the Entire Screen Builder Daemons

This step is only required for an upgrade installation. It is not required when you install Entire Screen Builder for the first time.

Stop the nswsrvd process using the following command:

```
stop servicename
```

Repeat this command for each Entire Screen Builder service that has been started.

Step 2: Establish the Environment

Ensure that the environment definitions, as described in *readme.txt* in the root directory of the Natural CD, are correct and set.

Step 3: Install Natural and Entire Screen Builder with the Demo Application

Entire Screen Builder and the demo application are automatically installed during the Natural installation.

When you install Natural and Entire Screen Builder, the directory *NATDIR:[nswnode]* is created, where *nswnode* contains the system name. The template files located in *NATDIR:[natvers.NSW]* are then copied to this new directory.

Once Natural and Entire Screen Builder with the demo application are installed, you must catalog the application SYSEXNSW by entering the following commands:

```
natural
logon SYSEXNSW
catall
```

Step 4: Check the Environment for Entire Screen Builder

Besides the logical names *NATDIR* and *natvers* as defined by Natural, Entire Screen Builder needs the following logical names which are created during the installation of Natural:

Logical Name	Description
nswnode	Contains the system name.
VAXC$PATH	Contains the physical device specification of *NATDIR:[natvers.BIN]*

Example:

```
Define VAXC$PATH="ALF9$DKB500:[NATURAL.V41212.BIN]"
```

In addition, the logical names *NATOW* and *NATFE* are redefined during the start of the daemon process to point to the Entire Screen Builder images *NATNSWnatvers.EXE* and *NATFENSWnatvers.EXE*.

Optional. If function keys and message lines are to be displayed in their native format (i.e. as normal text), set the environment variable NSW_PF_MSG_LINES_NATIVE_FORMAT to "YES":

```
Define NSW_PF_MSG_LINES_NATIVE_FORMAT="YES"
```

If NSW_PF_MSG_LINES_NATIVE_FORMAT is not set or if its value is not "YES", function keys and message lines are detected automatically (default). If they are to be treated in a special way, you have to define the basic rules Function Keys and Message Line in the same way as for a mainframe screen. This feature is available starting with Natural Version 4.1.2.21 and Natural Version 5.1.1.3.

Step 5: Define the TCP Port Number

The UCX service with the TCP port number must be defined in the system as follows:

```
$ UCX SET SERVICE NSWDEMO /PORT=22370 /FILE="" /USER="" /PROC=""
```

Instead of NSWDEMO and the above port number, you can also specify other values. For example, you can create or define the TCP service name NSWAPPL1 with the port number 25000.

Directories

The following directories are created when Natural is installed together with Entire Screen Builder on an OpenVMS system:

Directory	Description
NATDIR	Top-level Natural directory.
NATDIR:[natvers]	Directory with all components for the current Natural version.
NATDIR:[natvers.INSTALL]	Shell scripts and environment files to install the Natural product.
NATDIR:[natvers.BIN]	Entire Screen Builder executable files *NATFENSWnatvers.EXE*, *NATNSWnatvers.EXE* and *NSWSRVDnatvers.EXE*.
NATDIR:[natvers.FNAT]	Contains the Natural demo application SYSEXNSW for Entire Screen Builder.
NATDIR:[nswnode]	Contains the configuration files *NSWSRVD_servicename.COM*, *NSWSRVD_servicename.LOG*, *SERVICES.DAT* and *START_NSWSRVD.COM*.

The files *NSWSRVD_servicename.COM* and *NSWSRVD_servicename.LOG* are created when the Entire Screen Builder daemon *NSWSRVDnatvers.EXE* is started with the procedure *START_NSWSRVD.COM*.

servicename is the UCX service as defined in the file *SERVICES.DAT*.

natvers indicates the version number and patch level of the corresponding Natural version.

Configuration File

The configuration file *SERVICES.DAT* is located in the directory *NATDIR:[nswnode]*, where the *nswnode* contains the node name (for example, *NATDIR:[ALF9]SERVICES.DAT*).

The content of this configuration file is one line for each defined TCP service:

`servicename username natural parm1 ... parmn`

servicename	Must be the same name as used in the TCP port number definition (see above).
username	Not used.
natural	This is the program name which must not be changed.
parm1 … parmn	Dynamic Natural parameters.

Example:

```
nswdemo sag natural parm=mypar bp=bp1
nswapp1 sag natural parm=app1 bp=bp1
nswapp2 sag natural parm=app2 bp=bp2
```

Note:
If the *NSWSRVDnatvers* daemon does not detect Natural's dynamic parameter ETID, the daemon automatically adds the ETID to the list of the dynamic parameters to be passed to Natural. The ETID added by the daemon has the format `ETID=`*`number_ username`*. It is truncated if the string exceeds 8 characters.

Setting Up and Activating the NSWSRVD Daemon

The BYPASS privilege must be authorized for the account to start the Entire Screen Builder daemon. The BYPASS privilege must also be set for the daemon process.

When TCP port number and service have been defined (UCX) and the *SERVICES.DAT* template file has been modified according to your requirements, you can start the *NSWSRVD* daemon to use Entire Screen Builder.

To start the daemon, invoke the DCL procedure *START_NSWSRVD.COM* as follows:

```
@START_NSWSRVD.COM service natvers
```

service contains the name of the service as defined with UCX.

natvers defines the Natural version and patch level.

If both parameters *service* and *natvers* are omitted, the defaults NSWDEMO and the current Natural version are used. The command procedure creates the temporary file *NSWSRVD_ servicename.COM* which sets up the environment and creates all logicals for Entire Screen Builder and starts the daemon.

Once the daemon has been started, the file *NSWSRVD_ servicename.LOG* is created. This file contains information (including the errors) about the daemon.

NSWSRVD_ servicename.COM and *NSWSRVD_servicename.LOG* are located in the directory *NATDIR:[nswnode]*.

Note:
The account which starts the daemon must hold the privilege IMPERSONATE as the default privilege. It is not sufficient to have an authorized privilege.